# **OWNER'S MANUAL**



# polkaudio®

PA200.4 PA500.4 PA1100.5

4/5 CHANNEL AMPLIFIERS

AMPLIFICATEUR 4/5 CANAUX

AMPLIFICADORES DE 4 Ó 5 CANALES

4/5-KANAL-VERSTÄRKER

AMPLIFICATORI A 4/5 CANALI

AMPLIFICADORES DE 4/5 CANAIS

# **FRANÇAIS**

# Polk Audio—A Passion for Sound

Please take a moment and read through this manual before you get started. Installing a car audio system is a serious project. If you have any doubts about your ability to execute any of the installation steps found in this manual, save yourself a lot of grief and contact your local authorized Polk Audio AutoSound dealer. He (or she) is a professional installer and ready to help you get the most for your autosound dollar.

More information—including audio how-to articles, FAQs, and online manuals—is available on our award-winning website www.polkaudio.com/car. And if you ever have a question or comment, please feel free to call us or email us. In North America and Canada, call Polk Audio Customer Service 800-377-7655 (M-F, 9-6 EST) or via email polkcs@polkaudio.com. Outside the US, call 410-358-3600. We love to hear from you!

Here at Polk Audio, building loudspeakers and audio equipment is more than just our business—it's our passion. We're happy to share it with you.

matthew & Pole

Sincerely,

Matthew S. Polk Co-Founder

# Polk Audio—La passion du son

L'installation d'une chaîne audiophonique dans un véhicule est un projet d'envergure. Veuillez donc prendre le temps de lire ce manuel attentivement avant de procéder. Si après avoir étudié les instructions contenues dans ce manuel vous ne croyez pas avoir la compétence nécessaire pour installer tous les composants de la chaîne, contactez votre revendeur agréé Polk AutoSound. Les professionnels de Polk Auto Sound sauront installer votre nouvelle chaîne selon les règles de l'art et vous permettront d'en profiter au maximum.

Pour plus d'information—incluant des conseils pratiques, des FAQ et des manuels en ligne, visitez notre site web primé: www.polkaudio.com/car. Si vous avez des questions ou de commentaires, n'hésitez pas à contacter notre Service à la Clientèle—en Amérique du Nord et au Canada, par téléphone au: 800-377-7655 (L-V, 9-18 HE) ou par courriel à: polkcs@polkaudio.com. À l'extérieur des É.U., signalez le 410-358-3600.

Chez Polk Audio, la fabrication de haut-parleurs, d'enceintes et de composants audio est beaucoup plus qu'une entreprise commerciale—c'est une véritable passion. Il nous fait plaisir de la partager avec vous.

matthew & Pole

Cordialement,

Matthew S. Polk

Cofondateur

# **DEUTSCH**

# Polk Audio—Pasión por el Sonido

Lea todo este manual antes de comenzar. Instalar un sistema de sonido de automóvil es un proyecto serio. Si tiene dudas sobre su capacidad de llevar a cabo alguno de los pasos de instalación indicados en este manual, ahórrese problemas y comuníquese con su distribuidor local autorizado Polk Audio de sonido de automóviles. El (o ella) es un instalador profesional preparado para ayudarle a usted a aprovechar al máximo su dinero invertido en sonido de automóvil.

Hay más información (artículos sobre procedimientos, preguntas frecuentes y manuales en línea) en nuestro galardonado sitio Web www.polkaudio.com. Y si alguna vez tiene preguntas o comentarios, no dude en llamarnos o escribirnos por correo electrónico. En Estados Unidos y Canadá, comuníquese con el servicio al cliente de Polk Audio llamando al 800-377-7655 (lunes a viernes, de 9 a 6, hora del Este) o escribiendo un mensaje de correo electrónico a polkcs@polkaudio.com. Fuera de Estados Unidos y Canadá, llame al 410-358-3600. Nos encantaría saber de usted.

Aquí en Polk Audio, construir altavoces y equipos de sonido es más que una actividad comercial; es nuestra pasión. Nos encanta compartirla con usted.

matthew & Pole

Atentamente.

Matthew S. Polk Cofundador

# Polk Audio—Eine Leidenschaft für Sound

Lesen Sie sich bitte dieses Handbuch durch, bevor Sie anfangen. Die Installation eines Audiosystems in ein Auto ist kein Kinderspiel. Wenn Sie Zweifel haben, ob Sie einen der in diesem Handbuch beschriebenen Installationsschritte ausführen können, sollten Sie sich Ärger ersparen und Ihren örtlichen Polk Audio AutoSound-Fachhändler kontaktieren. Er (oder sie) kennt sich mit der Installation aus und kann Ihnen helfen, Ihre Audiosound-Investition optimal zu nutzen.

Weitere Information, darunter Audio-Anweisungen, Antworten auf häufig gestellte Fragen und Online-Handbücher finden Sie auf der preisgekrönten Website www.polkaudio.com/car. Wenn Sie je eine Frage oder einen Vorschlag haben, kontaktieren Sie uns bitte per Telefon oder E-Mail. In Nordamerika oder Kanada erreichen Sie den Polk Audio-Kundendienst telefonisch unter 800-377-7655 (M-F, 9-18 Uhr Ostküstenzeit) oder per E-Mail unter polkcs@polkaudio.com. Außerhalb der USA rufen Sie +1 410-358-3600 an. Wir freuen uns auf Ihren Anruf!

Bei Polk Audio ist die Fertigung von Lautsprechern und Audiogeräten mehr als unser Geschäft—es ist unsere Leidenschaft. Wir freuen uns, diese Leidenschaft mit Ihnen zu teilen.

Mit freundlichen Grüßen.

matthew & Polk

Matthew S. Polk Mitbegründer

# Polk Audio—La Passione del Suono

Prima di cominciare, accertatevi di aver letto questo manuale. L'installazione di un impianto audio per auto è una cosa seria. In caso di dubbi sull'esecuzione di alcune delle fasi di installazione contenute in questo manuale, vi invitiamo a rivolgervi subito al rappresentante Polk Audio AutoSound autorizzato di zona. I nostri rappresentanti sono installatori professionali a vostra disposizione per farvi ottenere il massimo dal vostro investimento.

Ulteriori informazioni, tra cui articoli su apparecchiature audio, domande frequenti e manuali online, sono disponibili sul nostro premiato sito web, www.polkaudio.com/car. In caso di domande o commenti, vi invitiamo a contattarci per telefono o e-mail. In Nord America e Canada, chiamate il servizio Assistenza clienti Polk Audio al numero verde 800-377-7655 (lunedì-venerdì, 9:00-6:00 fuso orario della costa orientale) o via e-mail all'indirizzo polkcs@polkaudio.com. Fuori degli Stati Uniti, chiamate il numero 001 410-358-3600. Apprezziamo i vostri commenti!

Alla Polk Audio, la creazione di altoparlanti e apparecchiature audio è molto più che la nostra attività—è una passione! Siamo lieti di condividerla con voi.

matthew & Pole

Cordialmente,

Matthew S. Polk Co-Fondatore

# Polk Audio—Paixão por Som

Reserve um pouco de tempo para ler este manual antes de começar. A instalação de um sistema de áudio de veículo é um projeto complexo. Se tiver alguma dúvida quanto à sua capacidade de realizar qualquer uma das etapas de instalação descritas neste manual, evite a frustração e entre em contato com o revendedor local autorizado pela Polk Audio para este tipo de instalação. O revendedor conta com instaladores profissionais prontos para ajudá-lo a maximizar seu investimento em um sistema sonoro para veículo.

Nosso website premiado contém informações mais detalhadas, incluindo artigos informativos com procedimentos passo a passo, perguntas freqüentes e manuais eletrônicos. Para obter essas e outras informações sobre áudio, visite www.polkaudio.com/car. E caso tenha alguma dúvida ou comentário, basta entrar em contato conosco por telefone ou e-mail. Na América do Norte e no Canadá, ligue para o Departamento de Atendimento ao Cliente da Polk Audio em +1 800-377-7655 (de segunda a sexta-feira, das 9:00 às 18:00, horário de Nova York) ou por e-mail pelo endereço polkcs@polkaudio.com. Caso esteja em outro país, ligue para 1-410-358-3600. Adoraríamos ouvir as suas opiniões!

Na Polk Audio, fabricar caixas acústicas e equipamentos de áudio é mais do que nosso negócio—é nossa paixão. Ficamos felizes em compartilhá-la com você.

matthew & Pole

Atenciosamente,

Matthew S. Polk

Co-fundador

5

#### WARNING

High-powered car audio systems may produce sound pressure levels that exceed the threshold at which hearing loss may result.

They may also impair a driver's ability to hear traffic sounds or emergency vehicles. Use common sense and practice safe listening habits when listening to or adjusting your audio system.

# **FEATURES**

- Super-efficient Class D PWM design runs much cooler than conventional amps (PA1100.5 only).
- High-speed MOSFET switching power supply and complementary bi-polar outputs
- Stereo, mono, or simultaneous stereo/mono operation
- Thermal, DC offset, reverse polarity, (short circuit and over/under voltage protection-PA500.4 and PA1100.5)
- Selectable 12dB/octave two-way crossover (PA200.4)
- Continuously variable 12dB/octave low-pass crossover (PA500.4 and PA1100.5)
- Switchable subsonic filter 24dB/octave (PA500.4 and PA1100.5)
- Switchable 8 dB bass EQ function.
- Switchable 180° phase inversion (PA500.4 and PA1100.5)
- Remote subwoofer level control function (PA500.4 and PA1100.5)
- Variable input sensitivity optimizes match with different signal sources.
- Chrome-plated wire terminals and RCA connectors ensure maximum signal transfer.
- Rugged heatsink and cover.
- Unity gain pass-through RCA jacks.

# **GETTING STARTED**

#### Take Inventory

Check to ensure you have everything in your Polk Audio amplifier carton to start enjoying your system. Inside, you should find:

- Polk Audio Amplifier (either PA200.4, PA500.4 or PA1100.5)
- 2. Hex Key
- 3. Screws (4)
- 4. Mounting Washers (4)
- 5. Locking Washers (4)

- 6. Rubber Washers (4)
- 7. Fuse Replacements
- 8. 4mm Allen Wrench
- 9. Wire Harness
- 10. Owner's Manual
- 11. Online Registration Card
- 12. Remote Volume Module (PA500.4/PA1100.5 only)
- 13. Phone Line Cord (PA500.4/PA1100.5 only)

**Important Note:** If anything is missing or damaged, or if your Polk Audio amplifier fails to operate, notify your dealer immediately. We recommend keeping your original carton and packing materials in case you need to ship the unit in the future.

In the event that your amplifier requires service or is ever stolen, you will need to have a record of the product's serial number. Please take the time to enter that number in the space provided below. The serial number can be found on the bottom panel of the amplifier and on the amplifier packaging.

Serial Number:

#### Polk Audio Customer Service 800-377-7655

(M-F, 9-6 EST, US & Canada only) or via email **polkcs@polkaudio.com**. Outside the US & Canada, call 410-358-3600. To learn more about Polk Audio 12V amplifiers go to www.polkaudio.com Polk Audio, Inc. 5601 Metro Drive Baltimore, MD 21215

# **READ THIS FIRST**

Installing a car audio system is a serious project. If you have any doubts about your ability to execute any of the installation steps found in this manual, save yourself a lot of grief and contact a professional installer. Your Polk Audio dealer is a good place to find one. If you intend to do the installation yourself we assume you possess some skill in the proper use of hand and power tools. No matter how much installation experience you have, we recommend that you...

- Read this manual thoroughly before you begin.
- Plan your installation carefully.
- Allow enough time to complete the installation without rushing.
- Take steps to protect your car and upholstery from unwanted scratches and punctures.
- Wear proper protective safety gear.

#### **Tools You May Need**

- · Phillips head screwdriver
- Panel pry tool
- Electric drill and 3/16" and 1/8" drill bits
- Permanent ink marker or pencil
- Solderless, crimp-on connectors and a crimping tool
- Safety glasses
- Wire strippers and cutters
- · Electrical tape
- Grommets for passing wires through metal car walls
- Amplifier Power Wire Kit (available at your authorized Polk Audio Dealer)

### SAFE LIMITS OF OPERATION

Polk Audio specifies the recommended amplification range for each of its passive (non-amplified) loudspeakers. Typi-cally that specification will be expressed as a range of power such as 20-200 Watts (per channel). It is important to understand what those numbers mean when choosing a receiver or amplifier for your Polk loudspeakers. The lower number indicates the lowest continuous rated power that will yield acceptable performance in a typical listening environment. The higher number indicates the highest per channel power that should be used with your Polk speakers. That number should not be confused with a "Power Handling" specification and it does not imply that the speaker will safely handle that full amount of power on a long-term basis. We specify a wide range of power ratings because not all electronics manufacturers use the same method for rating power. In fact, high quality lowerrated amplifiers sound better and play louder than low quality units with higher power rating.

Automobile horsepower is good analogy. Your car probably has far more horsepower than it needs for your daily commute and is likely capable of going well over 120 MPH (190KM/hr). Having that extra power is good for on-ramp acceleration and danger avoidance (like getting away from brain-eating zombies) but that doesn't mean that it is advisable to operate your car on North American highways at full power and maximum speed for an extended period of time. Just ask your local state trooper if you are in doubt. Similarly, we recommend using amplifiers and receivers with rated power above the Power Handling limits of our speakers because having extra power available for short terms peaks is conducive to better sound quality, maximum dynamic range and effortless high volume output. But we strongly urge you not to use the full power of your amp or receiver for daily listening.

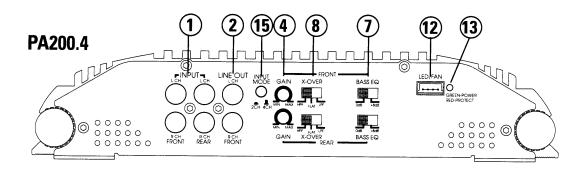
Loudspeakers can be damaged when an amplifier, regardless of its wattage, is made to play at higher listening levels than its power can clearly produce. Operation at this level can result in very high levels of audible distortion originating in the amplifier, which can add a harsh, gritty sound to your listening material. If you hear distortion—turn the volume down or risk damaging your speakers. You can damage just about any speaker, regardless of power rating, if you drive an amplifier to or beyond the point of distortion.

# **INSTALLATION GUIDELINES**

- 1. Please read this owner's manual carefully before installing this amplifier.
- 2. Disconnect the battery ground terminal prior to making any electrical connections.
- Check for any hazards or obstructions such as gas tanks, fuel or brake lines, and wiring harnesses before mounting the amplifier.
- 4. Pick a mounting location that will provide adequate access and ventilation and protect the amplifier from heat, moisture, and dirt.
- 5. To securely mount your amplifier you must first remove the top cover assembly. Unscrew the four (4) top cover assembly retaining screws using the supplied 4mm Allen Wrench.
- Avoid sharp metal areas when routing cables to the amplifier, and run RCA cables away from the power cables and other potentially noisy car harnesses.
- 7. The amplifier should be grounded with a short, heavy gauge wire connected directly to the car at a bare metal surface, preferably scraped body sheet metal. Do not use factory ground locations, seat bolts, or brackets that are spot welded.
- 8. Always fuse your power connection within 8 to 10 inches of the battery terminal. Use a fuse or circuit breaker rated slightly more than the on-board fuse(s) of the amplifier(s). The gauge of power wire used should take into account the total current draw of the system, and the length of wire used. IASCA and other auto sound competition organizations have charts available for this; you can also find a chart in the MECP study guide. Minimum wire gauge recommendations for the individual amplifiers are listed on the specification page. Always use the same gauge wire for the amplifier ground that you use for the power wire. Be sure to examine the battery ground cable of the vehicle, and if necessary, upgrade it by adding an additional ground wire that is the same gauge as the amplifier's power wire. Remember, the amplifier can only deliver its rated output when it is not current limited by the power and ground supply wires.
- This amplifier is designed to drive a speaker load that measures from 2 to 8 Ohms (1 Ohm on the PA1100.5 Sub Output). Keep in mind that heat is the long-term

- enemy of automotive electronics and the lower your speaker load, the more heat is generated. For low-impedance speaker applications or restricted ventilation installations, an external cooling fan may be advisable.
- 10. Battery and ground connections to the vehicle should be made with crimped ring terminals of the appropriate size (surface area is what counts;) soldering the terminals after crimping is also recommended.
- 11. Due to the high-frequency MOSFET switching power supply, filtering the power cable is not generally required (remember that the amp can't deliver full output if the power supply is restricted). Proper grounding of the signal source is mandatory for the amplifier to reach its performance peak. If the RCA inputs are not grounded adequately via the signal source, electrical noise from the vehicle may be picked up in the system.

# FIGURE 1—AMPLIFIER CONNECTIONS/CONTROLS—FRONT (PA200.4)



# FRONT PANEL CONNECTIONS/CONTROLS

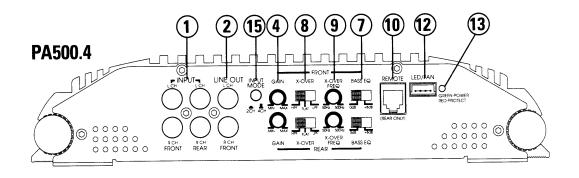
- RCA Input Jacks—Accepts line level outputs from head units or signal processors at voltages between 250mV and 7.5 volts. (The PA500.4 and PA1100.5 also have a Rear Input.)
- RCA Line Output Jacks—These pass-through RCA jacks can be used to send the input signal to a second amplifier.
- Line Out Switch (PA1100.5)—three positions: sum L/R—left front and rear and right front and rear channels are summed.
  - **sub L+R**—set the switch to this position when using an additional PA600.1 amplifier connected in Parallel mode.
  - **sub 180**—set the switch to this position when using an additional PA600.1 amplifier connected in External Bridge mode.
- Gain Control—Controls the amplifier's sensitivity and is used to match the input level of the amplifier to the output level of the signal source (front and rear on PA500.4 and PA1100.5).
- 5. **Subsonic Switch**—The OFF position takes the filter out of the system, the IN position places the filter into the system (PA1100.5).
- 6. **Sub Gain**—— Subwoofer channel gain adjustment.
- 7. **Bass EQ Switch**—Adds 8dB additional bass boost (PA200.4 and PA500.4). Allows 8db additional bass boost on the sub channel (PA1100.5).

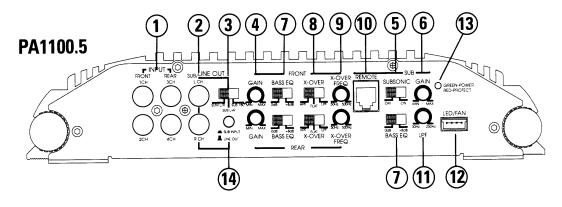
# 8. X-Over Selection Switch (HPF, Flat, LPF)-

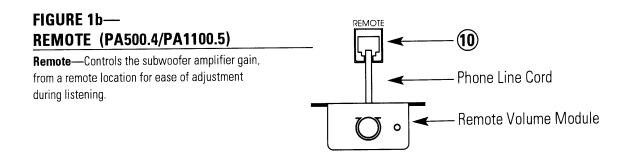
The HPF attenuates low frequencies and is used with mid-range speakers and tweeters. Flat does not attenuate any frequencies and is for full range speaker systems. LPF attenuates high frequencies and is used for subwoofers.

- 9. **X-Over Frequency**—adjusts the crossover point (50-500Hz) for the on-board active crossover (PA500.4 and PA1100.5).
- Remote Optional accessory which allows the level to be adjusted remotely (usually located for control by the vehicle's driver). (PA500.4 and PA1100.5)
- 11. **LPF Control(PA1100.5)**—Sets high frequency limit of subwoofer channel.
- 12. **LED/FAN**—Allows connection of an optional LED light bar or optional cooling fan for the amplifier.
- 13. Status LED—Will illuminate GREEN to indicate the amplifier is on and operating normally, and will be illuminated RED if the amplifier shuts down due to short circuit, DC offset, or overheating detected by onboard protection circuitry.
- Sub Input/Line Out—selects RCA jacks (4) (Sub/ Line Out) as either Subwoofer Input or Line Output (PA1100.5).
- Input Mode Switch—Selects 2 or 4 channel operation (PA200.4 and PA500.4).

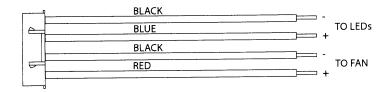
# FIGURE 1a—AMPLIFIER CONNECTIONS/CONTROLS—FRONT (PA500.4/PA1100.5)







# FIGURE 2—LED/FAN HARNESS



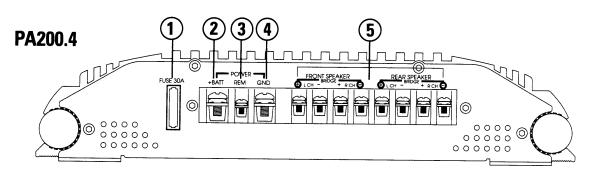
# REAR PANEL CONNECTIONS

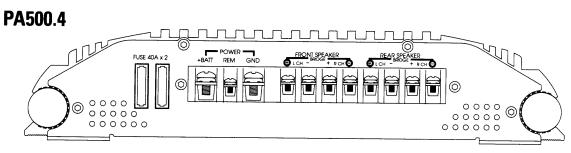
- Fuses—These fuses protect the amplifier against internal electrical damage and are meant to protect the amplifier only. All other power connections should be fused at the source. The PA200.4 uses 1-30A fuse, the PA500.4 uses 2-40A fuses and the PA100.5 uses 3-40A fuses.
- (+) 12 Volt Power—Connect this terminal through a FUSE or CIRCUIT BREAKER to the positive terminal of the vehicle battery or the positive terminal of an isolated audio system battery.

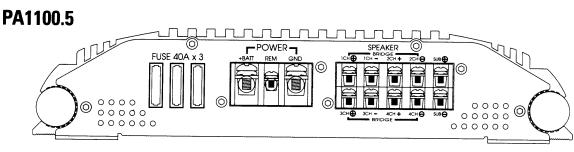
**WARNING:** Always protect this power wire by installing a fuse or circuit breaker of the appropriate size within 12 inches of the battery terminal connection.

- 3. **Remote Turn On**—This terminal turns on the amplifier when (+) 12 volt is applied to it. Connect it to the remote turn on lead of the head unit or signal source.
- 4. **Ground**—Connect this terminal directly to the sheet metal chassis of the vehicle, using the shortest wire necessary to make this connection. Always use wire of the same gauge or larger than the (+) 12 volt power wire. The chassis connection point should be scraped free of paint and dirt. Use only quality crimped and/or soldered connectors at both ends of this wire. DO NOT connect this terminal directly to the vehicle battery ground terminal or any other factory ground points.
- Speaker Terminals—Connect subwoofers to these terminals. (Refer to the Speaker Wiring Diagrams section of this quide.)

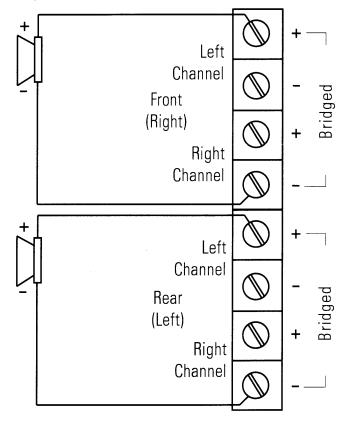
# FIGURE 3—AMPLIFIER CONNECTIONS—REAR (PA200.4/PA500.4/PA1100.5)



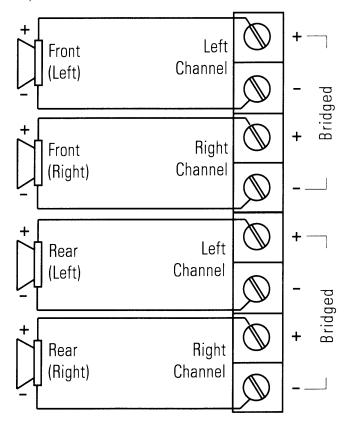




# **Stereo Operation—2 Channel** (top view)

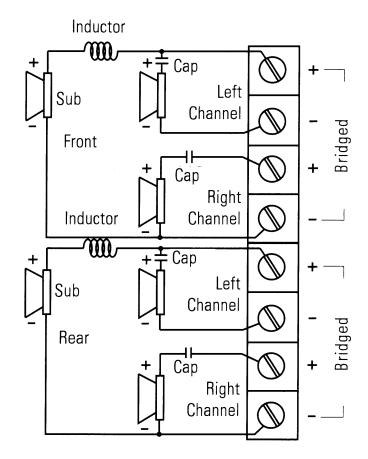


# Stereo Operation—4 Channel (top view)



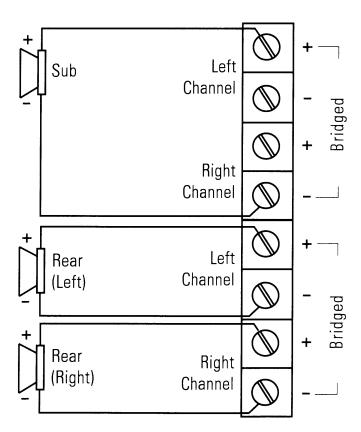
# Passive Tri-Mode (top view)

**NOTE:** Consult your loudspeaker manufacturer for recommended inductor and capacitor values.



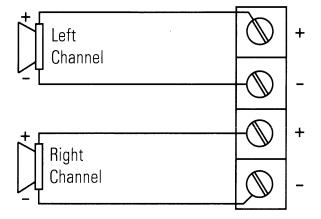
# 2 Channel Stereo with Mono Sub

(top view) with active crossovers

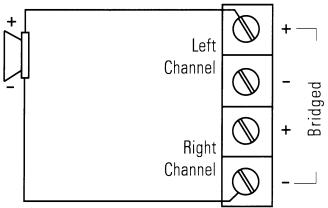


# FIGURE 4—SPEAKER WIRING DIAGRAMS (PA500.4)

# Stereo Operation (top view)

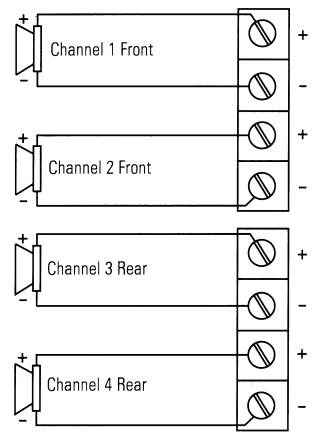


# **Bridged Operation** (top view)

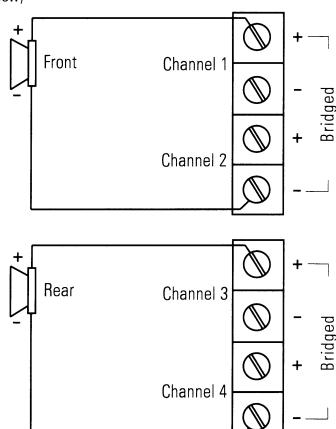


**NOTE:** The PA500.4 amplifier connections are the same as shown above, except that there are outputs for Front and Rear Speakers.

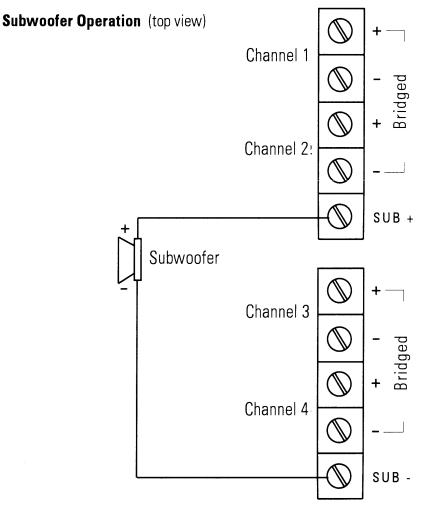
# Front/Rear Operation (top view)



# Front/Rear Bridged Operation (top view)



# FIGURE 4—SPEAKER WIRING DIAGRAMS (PA1100.5)



# CROSSOVER SETTINGS AND GAIN ADJUSTMENT

Your Polk Audio power amplifier needs to be adjusted carefully to achieve maximum performance. These are some guidelines to follow when fine-tuning the amplifier.

- For full-range and simultaneous stereo/mono bass applications, the crossover selection switch should be set to FULL. If the amplifier is driving your subwoofers, set the switch to LOW, and for mid-bass/ midrange output, set to HIGH.
- The crossover frequency control needs to be adjusted to suit your particular system. For subwoofer applications, try and keep the setting low enough to prevent image smearing (you should not be able to hear male voices from the subwoofer) but not so low as to create a gap between the subwoofer and the mid-bass/midrange speakers. For mid-bass/midrange settings, try to keep the setting low enough to keep your sound stage in front of you, without overdriving the speaker. It will be to your advantage to spend some extra time with this adjustment, listening to familiar music or system set-up discs to achieve the kind of musical reproduction that you prefer.
- The gain adjustment allows you to set proper signal match for clean, quiet amplifier operation. For full-range and simultaneous stereo/mono bass applications, start by playing some music you are familiar with. With the gain adjustment on the amplifier in the middle of its rotation, bring up the volume on your head unit to the 3/4 volume setting or until you start to hear distortion or clipping. If you hear distortion before you reach the 3/4 volume setting of your head unit, reduce the gain setting on the amplifier and start to raise the head unit volume again. When you can listen to the music at or slightly above 3/4 on your head unit without audible distortion, slowly raise the gain of the amplifier until distortion is heard, then back off the gain until the distortion is not audible. This setting will allow you to reach full output with all but the quietest of source material, while avoiding excessive noise in the system.

**NOTE:** Polk amplifiers use a digital gain control with a finite number of adjustment steps. A very small adjustment may not cause any audible change in level.

# **LED TUBE INSTALLATION (OPTIONAL)**

These Polk Audio amplifiers have been designed with a custom heat sink that can accommodate two (optional—not supplied) VARAD LED tubes.

- Before installing the LED tubes, remove and discard the mounting feet from the VARAD LED tubes.
- 2. Slide each LED tube assembly into your Polk Audio amplifier heat sink. Ensure that the LEDs are facing out for optimal visibility. The wires from the LED tube assembly should be on the signal input end of the amplifier. The Black wire from the LED tube is ground and the Black/White wire from the LED tube is power.
- Run the two wires from the tube assembly and connect them to the 4-pin LED/FAN input connector. Refer to the LED/FAN harness diagram given earlier in this manual.

**NOTE:** If the optional fan **IS NOT** being used, we recommend that the second LED tube be wired to this circuit. If the optional fan is being used, we recommend that the second LED tube be wired in parallel with the first LED tube.

# SUBSONIC FILTER ADJUSTMENT (PA1100.5 only)

This amplifier uses a subsonic filter to maximize the performance of a subwoofer. The subsonic filter is a high-pass filter that removes unwanted bass output at very low frequencies form the woofer. This increases the output of a subwoofer by as much as 3 dB by increasing the mechanical power handling of the subwoofer. Depending on the type of enclosure the subsonic filter can increase the useable low frequency output by an additional 10dB!

Acceptable boost levels are determined by the type of enclosure used, wattage of the amplifier, and the subwoofer's excursion capability.

The following guidelines should be used for proper set up of the subsonic filter to provide optimum performance and reliability from your system.

## **CEA SPECIFICATIONS**

PA1100.5



**PA200.4** Power Output: 45 Watts RMS x 4 channels at 4 Ohms and  $\leq$  1% THD+N

Signal to Noise Ratio: -80 dBA (reference 1 Watt into 4 Ohms)

Additional Power: 50 Watts RMS x 4 channels at 2 Ohms and ≤ 1% THD+N



PA500.4 Power Output: 90 Watts RMS x 4 channels at 4 Ohms and ≤ 1% THD+N

Signal to Noise Ratio: -81 dBA (reference 1 Watt into 4 Ohms)

Additional Power: 125 Watts RMS x 4 channels at 2 Ohms and ≤ 1% THD+N



Power Output: 80 Watts RMS x 4 channels at 4 Ohms and ≤ 1% THD+N

280 Watts RMS X 1 channel at 4 ohms ≤1% THD+N

Signal to Noise Ratio: -80 dBA (reference 1 Watt into 4 Ohms)

Additional Power: 125 Watts RMS x 4 channels at 2 Ohms ≤ 1% THD+N

Additional Power Subchannel: 600Watts RMS x 1 channel at 1 0hm ≤ 1% THD+N

SPECIFICATIONS	PA200.4	PA500.4	PA1100.5	
D . D D	80W x 4	200W x 4	200W x 4 @ 2 Ohms	
Dynamic Power Rating	@ 2 Ohms	@ 2 Ohms	1200W x 1 @ 1 0hm	
RMS Continuous Power	100W x 2	250W x 2	250W x 2	
Bridged @ 4 Ohms			600W x 1 @ 1 0hm	
RMS Continuous Power	50W x 4	125W x 4	125W x 4	
@ 2 Ohms²			600W x 1 @ 1 0hm	
RMS Continuous Power	35W x 4	90W x 4	80W x 4	
@ 4 Ohms¹			280W x 1	
Conversion Efficiency		>66% @ 4 ohms	>66% @ 4 ohms	
Frequency Response	20Hz-20kHz	20Hz-20kHz	20Hz-20kHz	
Signal to Noise Ratio	>90dBA	>98dBA	>98dBA	
Separation	65db @ 1kHz	65db @ 1kHz	65db @ 1kHz	
Damping Factor	>100	>150	>150 (>50 sub channel)	
Crossover Type/Range	Switchable high or low pass	2-way Butterworth 50 to 500Hz	2-way Butterworth 50 to 500Hz	
Crossover Slope	12dB/octave	12dB/octave	12dB/octave	
Bass Equalization	+8dB, centered @ 40Hz	0 to +8dB	0 to +8dB	
Subsonic Filter			Variable	
RCA Input/Output Jacks	2-channel in/2-channel paralleled full range out			
Input Impedance	20K ohms	20K ohms	20K ohms	
Input Sensitivity	Variable from 250mV to 7.5V	Variable from 250mV to 8V	Variable from 250mV to 8V	
Supply Voltage	10-16VDC	10-16VDC	10-16VDC	
Fusing/Type	1 x 30A	2 x 40A	3 x 40A	
Minimum Cable Required	#10	#8	#8	
Port Output (Optional Fan) LED(Optional)	12V @ <200mA	12V @ <200mA	12V @ <200mA	

¹ RMS continuous power driven into 4 Ohms from 20 to 20,000 Hz @ 14.4VDC with less than 0.08% THD+N.

 $<sup>^{2}</sup>$  RMS continuous power driven into 2 Ohms from 20 to 20,000 Hz @ 14.4VDC with less than 0.15% THD+N.

# **ABOUT POLK AUDIO**

Polk Audio is an award-winning designer and manufacturer of high performance audio products and the largest audio brand of Directed Electronics, Inc. (NASDAQ, DEIX). Founded in 1972 by three Johns Hopkins University graduates, Polk Audio holds over 50 patents for advances in loudspeaker design and technology. Polk's products include loudspeakers and electronic components for home, auto and marine applications, the first satellite radio home component tuner, the world's first audiophile-grade active IP-addressable loudspeaker, the first THX® Ultra2 Certified in-ceiling loudspeaker, and I-Sonic®—the first entertainment system to include HD Radio,® XM Connect & Play capability and a DVD player. Polk products are available through authorized specialist consumer electronics retailers worldwide.

For more information and the location of a Polk retailer or distributor in your area please visit www.polkaudio.com or call us at 1-800-377-7655 (M-F, 9-6 EST, US & Canada only). Outside of North America call +1 (410) 358-3600. Polk Audio, Inc. 5601 Metro Drive, Baltimore, MD 21215 www.polkaudio.com

# **FRANÇAIS**

### **POLK AUDIO**

Polk Audio est une compagnie spécialisée dans la conception et la fabrication de produits audio de haute performance. Elle est la marque de produits audio la plus importante de Directed Electronics, Inc. (NASDAQ, DEIX). Fondée en 1972 par trois gradués de l'Université Johns Hopkins, Polk Audio détient plus de 50 brevets pour ses innovations en technologie et design audio. Les produits Polk primés comprennent des haut-parleurs et composants électroniques pour la maison, l'automobile et le bateau, le premier syntoniseur radio satellite pour la maison, le premier haut-parleur actif de qualité audiophile adressable par IP, le premier haut-parleur encastrable pour plafond certifié THX® Ultra2, et le premier système de loisir comprenant la Radio HD, la compatibilité au «XM Connect & Play» et un lecteur DVD. Les produits Polk sont disponibles chez les revendeurs agréés spécialisés dans la revente de composants électroniques pour consommateurs.

Pour plus d'information et l'adresse d'un revendeur ou d'un distributeur Polk Audio dans votre région, visitez www.polkaudio.com ou communiquez avec nous au 1-800-377-7655 (L.-V., 9-18, HNE, Canada et É.-U. seul). À l'extérieur des É.-U. et du Canada, composez le +1 (410)-358-3600.

Polk Audio, Inc. 5601 Metro Drive, Baltimore, MD 21215 www.polkaudio.com

# **ESPANOL**

# **ACERCA DE POLK AUDIO**

Polk Audio es un fabricante y diseñador galardonado de productos de sonido de alto rendimiento y la mayor marca de sonido de Directed Electronics, Inc. (NASDAQ, DEIX). Polk Audio fue fundada en 1972 por tres graduados de la Johns Hopkins University y tiene más de 50 patentes por avances de diseño y tecnología de altavoces. Entre los productos de Polk se encuentran los altavoces y componentes electrónicos para aplicaciones en el hogar, el automóvil y la embarcación, el primer sintonizador componente residencial de radio por satélite, el primer altavoz del mundo con dirección de protocolo de Internet activo y calidad audiófila, el primer altavoz empotrado en cielo raso con certificación THX® Ultra2 y el I-Sonic<sup>®</sup>, primer sistema de entretenimiento con capacidad HD Radio® y XM Connect & Play y un reproductor de CD. Los productos de Polk están a su disposición a través de minoristas especialistas autorizados de productos electrónicos para el consumidor en todo el mundo.

Para obtener más información y la ubicación de un distribuidor o minorista de Polk cerca de usted, visite www.polkaudio.com o llame al 800-377-7655 (lunes a viernes, de 9 a 6, hora del Este, sólo Estados Unidos y Canadá). Fuera de Estados Unidos y Canadá, llame al 410-358-3600.

Polk Audio, Inc. 5601 Metro Drive, Baltimore, MD 21215 www.polkaudio.com

# **DEUTSCH**

# ÜBER POLK AUDIO

Polk Audio ist ein preisgekrönter Entwickler und Hersteller von Hochleistungs-Audiogeräten und die größte Audiomarke von Directed Electronics, Inc. (NASDAQ, DEIX). Polk Audio wurde 1972 von drei Absolventen der Johns Hopkins University gegründet und besitzt mehr als 50 Patente für Entwicklungen im Design und der Technologie von Lautsprechern. Die Produkte von Polk umfassen Lautsprecher und elektronische Geräte für den Heim-, Auto-und Bootseinsatz, den ersten Satellitenradio-Komponententuner für den Heimgebrauch, den ersten audiophilen Aktivlautsprecher der Welt mit IP-Adressierung, den ersten THX® Ultra2-zertifizierten Deckenlautsprecher und I-Sonic®-das erste Unterhaltungssystem mit HD Radio," XM Connect & Play-Fähigkeit und einem DVD-Player. Polk-Produkte sind weltweit über autorisierte Unterhaltungselektronik-Fachhändler erhältlich.

Weitere Informationen und den Standort eines Polk-Händlers oder Vertriebs finden Sie unter www.polkaudio.com, oder telefonisch unter 1-800-377-7655 (M-F, 9-18 Uhr Ostküstenzeit, nur USA und Kanada). Außerhalb Nordamerikas rufen Sie bitte +1 (410) 358-3600 an. Polk Audio, Inc. 5601 Metro Drive, Baltimore, MD 21215 www.polkaudio.com

## **PORTUGUES**

# **INFORMAZIONI SU POLK AUDIO**

Polk Audio è una premiata ditta che progetta e costruisce prodotti audio ad alte prestazioni e la più affermata marca audio di Directed Electronics, Inc. (NASDAQ, DEIX). Fondata nel 1972 da tre studenti della Johns Hopkins University, Polk Audio detiene oltre 50 brevetti ottenuti per miglioramenti al design e alla tecnologia degli altoparlanti. I prodotti Polk includono altoparlanti e componenti elettronici per la casa, l'auto ed applicazioni nautiche, il primo sintonizzatore satellitare per componenti per uso domestico, il primo altoparlante al mondo con indirizzo IP attivo di tipo audiofilo, il primo altoparlante a soffitto omologato THX® Ultra2 e I-Sonic®, il primo sistema audiovisivo che include HD Radio®, funzionalità XM Connect & Play e un lettore di DVD. I prodotti Polk sono disponibili in tutto il mondo presso rivenditori autorizzati specializzati in elettronica.

Per ulteriori informazioni e per trovare un rivenditore o distributore Polk di zona, visitare www.polkaudio.com o chiamare il nostro numero verde 1-800-377-7655 (dal lunedì al venerdì dalle 9:00 alle 18:00, fuso orario della costa orientale, solo USA e Canada). Fuori dal Nord America chiamare il numero 001 410 358-3600.

Polk Audio, Inc. 5601 Metro Drive, Baltimore, MD 21215 www.polkaudio.com

# **SOBRE A POLK AUDIO**

A Polk Audio é uma empresa que projeta e fabrica produtos de áudio de alto desempenho premiados, sendo a major marca de áudio da Directed Electronics, Inc. (NASDAQ, DEIX). Fundada em 1972 por três formandos da Universidade Johns Hopkins, a Polk Audio detém mais de 50 patentes por avanços realizados em projetos e tecnologias de caixas acústicas. Entre os produtos da Polk estão caixas acústicas e componentes eletrônicos para aplicações residenciais, automotivas e marítimas, o primeiro sintonizador de radio via satélite para uso residencial, a primeira caixa acústica do mundo com endereço IP ativo e qualidade que satisfaz ao mais exigente entusiasta de áudio, a primeira caixa acústica de teto com certificação THX® Ultra2, e o I-Sonic®o primeiro sistema de entretenimento a oferecer capacidade para HD Radio, XM Connect & Play e um toca-DVD. Os produtos da Polk estão disponíveis em lojas de varejo que vendem produtos eletrônicos especializados destinados ao mercado consumidor no mundo inteiro.

Para obter mais informações e localizar um revendedor ou distribuidor da Polk em sua área, visite o site www.polkaudio.com ou ligue para 1-800-377-7655 (de segunda a sexta-feira, da 9:00 às 18:00, horário de Nova York, apenas nos EUA e Canadá). Fora da América do Norte, ligue para +1 (410) 358-3600. Polk Audio, Inc. 5601 Metro Drive, Baltimore, MD 21215 www.polkaudio.com

Polk Audio is a Directed Electronics company which trades on NASDAQ under the symbol DEIX. Investor information can be found at http://investor.directed.com.

"Polk Audio" and "I-Sonic" are registered trademarks of Britannia Investment Corporation used under license by Polk Audio, Inc.

Polk Audio est une compagnie de la Directed Electronics inscrite à la NASDAQ sous le symbole DEIX. Pour des informations boursières visitez: http://investor.directed.com. «Polk Audio» et «I-Sonic» sont des marques de commerce enregistrées de la Britannia Investment Corporation utilisées sous licence par Polk Audio Inc.

Polk Audio es una empresa de Directed Electronics, la cual tiene operaciones bursátiles en el índice NASDAQ bajo el símbolo DEIX. Hay información para inversionistas en http://investor.directed.com. "Polk Audio" y "I-Sonic" son marcas comerciales registradas de la Britannia Investment Corporation que Polk Audio, Inc. usa bajo licencia.

Polk Audio ist ein Unternehmen der Directed Electronics-Gruppe, die bei NASDAQ unter dem Symbol DEIX gehandelt wird. nvestoreninformationen finden Sie unter http://investor.directed.com. "Polk Audio" und "I-Sonic" sind eingetragene Marken der Britannia Investment Corporation, die unter Lizenz von Polk Audio, Inc. verwendet werden.

Polk Audio è un'azienda Directed Electronics, quotata sul listino NASDAQ con il simbolo DEIX. Per informazioni concernenti gli investitori visitare il sito http://investor.directed.com. "Polk Audio" e "I-Sonic" sono marchi registrati di Britannia Investment Corporation, utilizzati su licenza da Polk Audio, Inc.

A Polk Audio é uma empresa da Directed Electronics, negociada na NASDAQ com o símbolo DEIX. Informações para investidores estão disponíveis em http://investor.directed.com. "Polk Audio" e "I-Sonic" são marcas registradas da Britannia Investment Corporation usadas sob licença pela Polk Audio, Inc.

## LIMITED WARRANTY

Polk Audio, Inc., warrants to the original retail purchaser only. This warranty will terminate automatically prior to its stated expiration if the original retail purchaser sells or transfers the Product to any other party.

Polk Audio, Inc., warrants, to the original retail purchaser only, that the LOUDSPEAKER(S), PASSIVE CROSSOVER COMPON-ENT(S) and ENCLOSURE on this Polk Audio Loudspeaker Product will be free from defects in material and workmanship for a period of one (1) year from the date of original retail purchase from a Polk Audio Authorized Dealer, and 2 years if installed by the same dealer.

To allow Polk Audio to offer the best possible warranty service, please register your new product online at: www.polkaudio.com/registration or call Polk customer service 800-377-7655 in the USA and Canada (outside the USA: 410-358-3600) within ten (10) days of the date of original purchase. Be sure to keep your original purchase receipt.

Defective Products must be shipped, together with proof of purchase, prepaid insured to the Polk Audio Authorized Dealer from whom you purchased the Product, or to the Factory at 2550 Britannia Boulevard, Suite A, San Diego, California 92154. Products must be shipped in the original shipping container or its equivalent; in any case the risk of loss or damage in transit is to be borne by you. If upon examination at the Factory or Polk Audio Auth-orized Dealer it is determined that the unit was defective in materials or workmanship at any time during this Warranty period, Polk Audio or the Polk Audio Authorized Dealer will, at its option, repair or replace this Product at no additional charge, except as set forth below. All replaced parts and Products become the property of Polk Audio. Products replaced or repaired under this warranty will be returned to you, within a reasonable time, freight prepaid.

This warranty does not include service or parts to repair damage caused by accident, disaster, misuse, abuse, negligence, inadequate packing or shipping procedures, commercial use, voltage inputs in excess of the rated maximum of the unit, cosmetic appearance of cabinetry not directly attributable to defect in materials or workmanship, or service, repair, or modification of the Product which has not been authorized or approved by Polk Audio. This warranty shall terminate if the Serial number on the Product has been removed, tampered with or defaced.

This warranty is in lieu of all other expressed Warranties. If this Product is defective in materials or workmanship as warranted above, your sole remedy shall be repair or replacement as provided above. In no event will Polk Audio, Inc. be liable to you for any incidental or consequential damages arising out of the use or inability to use the Product, even if Polk Audio, Inc. or a Polk Audio Authorized Dealer has been advised of the possibility of such damages, or for any claim by any other party. Some states do not allow the exclusion or limitation of consequential damages, so the above limitation and exclusion may not apply to you.

All implied warranties on this Product are limited to the duration of this expressed Warranty. Some states do not allow limitation on how long an implied Warranty lasts, so the above limitations may not apply to you. This Warranty gives you specific legal rights, and you also may have other rights which vary from state to state.

This Warranty applies only to Products purchased in Canada, the United States of America, its possessions, and U.S. and NATO armed forces exchanges and audio clubs.

The Warranty terms and conditions applicable to Products purchased in other countries are available from the Polk Audio Authorized Distributors in such countries.

# **GARANTIE LIMITÉE**

La garantie de Polk Audio, Inc., n'est valide que pour l'acheteur au détail original. La garantie sera automatiquement annulée avant sa date d'expiration spécifiée si l'acheteur original vend ou transfère le produit à tout autre parti.

Polk Audio Inc., garantit, à l'acheteur original seulement, que le(s) haut-parleur(s), séparateur(s) passif(s) et boîtier de ce produit Polk Audio sera exempt de tout défaut attribuable aux pièces d'origine et à la main d'oeuvre pour une période de un (1) an à partir de la date de l'achat au détail original chez un revendeur agréé Polk Audio et deux (2) ans si installé par ce même revendeur.

Pour permettre à Polk Audio de vous offrir le meilleur service de garantie possible, veuillez enregistrer votre nouveau produit en ligne: www.polkaudio.com/registration—ou contactez le Service à la Clientèle de Polk au 800-377-7655 aux États-Unis et au Canada (à l'extérieur des É.U.:410-358-3600) dans les dix (10) jours suivant la date de l'achat original. Assurez-vous de conserver votre reçu d'achat original.

Les produits défectueux doivent être expédiés, avec une preuve d'achat, francs de port et assurés, au revendeur agréé Polk Audio de qui vous avez acheté le produit, ou à l'usine Polk Audio, 2550 Britannia Boulevard, Suite A, San Diego, California 92154.

Les produits doivent être expédiés dans leur carton d'expédition original ou dans un contenant équivalent. Le propriétaire doit assumer tout risque de perte ou de dommage en transit. Si, suite à l'examen du produit à l'usine Polk ou chez le marchand agréé Polk Audio, il est déterminé que la défectuosité est imputable aux matériaux d'origine ou à la main d'oeuvre au cours de la période de la garantie spécifiée, Polk Audio ou le revendeur Polk Audio, à sa guise, réparera ou remplacera le produit sans frais additionnels et selon les conditions décrites ci-dessous. Toute pièce ou produit remplacé devient la propriété de Polk Audio. Les produits réparés ou remplacés sous la garantie vous seront expédiés francs de port dans un délai raisonnable.

Cette garantie n'inclut pas le service ou les pièces nécessaires à la réparation des dommages provoqués par accident, désastre, abus, négligence, mode d'expédition ou emballage inadéquat, utilisation commerciale, tensions supérieures au maximum prescrit pour l'unité, aspect visuel du meuble non directement attribuable à un défaut de pièces d'origine ou de main d'oeuvre, ou par le service, la réparation, ou toute modification du produit qui n'a pas été autorisé ou approuvé par Polk Audio. Cette garantie sera annulée si le numéro de série sur le produit a été enlevé, altéré ou falsifié.

Cette garantie prend préséance sur toutes autres garanties énoncées. Si la défectuosité de ce produit est imputable aux pièces d'origine ou à la main d'oeuvre selon les conditions de la garantie exprimées ci-dessus, votre seul recourt sera la réparation ou le remplacement selon les conditions décrites ci-dessus.

Dans aucun cas Polk Audio, Inc. pourra-t-elle être tenue responsable pour tout dommage accessoire ou indirect causé par l'utilisation ou par l'empêchement de l'utilisation du produit, même si Polk Audio, Inc. ou un revendeur agréé Polk Audio, a été avisé de la possibilité de tel dommage, ou pour toute réclamation par tout autre parti.

Certains états ne permettant pas l'exclusion ou la limitation des dommages indirects, les limitations et exclusions exprimées ci-dessus pourraient ne pas s'appliquer dans votre cas.

Toutes les garanties tacites sur ce produit sont limitées à la durée de la garantie énoncée. Certains états ne permettant pas la limitation de la durée d'une garantie tacite, les limitations ci-dessus pourraient ne pas s'appliquer dans votre cas. Cette garantie vous accorde des droits légaux spécifiques; vous pourriez également avoir d'autres droits qui pourraient varier d'état en état.

Cette garantie s'applique seulement aux produits achetés au Canada, aux États-Unis d'Amérique et ses possessions, et dans les clubs audio et d'échange des forces armées des É.U. et de l'OTAN. Les modalités et les conditions de garantie applicables aux produits achetés dans d'autres pays sont disponibles chez les distributeurs agréés Polk Audio établis dans ces pays.



# polkaudio

5601 Metro Drive
Baltimore, MD 21215
800-377-7655

(Outside USA & Canada: 410-358-3600)

www.polkaudio.com



# polkaudio<sup>®</sup>

This is your Product Model and Serial Number. Enter this number in the "Serial Number" space when registering your product online. Keep this card handy for Model and Serial Number reference when calling Polk Customer Service.



# Register Your New Polk Audio Product Online NOW for a Chance to win \$500 of Polk Product www.polkaudio.com/registration/

# Become a valued member of the Polk Family and get a chance to win FREE Speakers. Registering your new product:

- Creates a permanent record of your purchase, in case you misplace your original receipt.
- ► Enters you in our monthly FREE drawing for \$500-worth of Polk Audio Speakers.
- Allows you to enroll in Club Polk: for informative Polk Website Forums, special discounts in the Polk Webstore, advance notice of Polk Promos, and discounts on Authorized Polk Audio parts.
- ▶ Keeps you up to date when there is news and announcements about your product.
- Gives you the option to "opt-in" for Polk Audio's Audio Enjoyment Enhancers: Our Monthly Emails, with news, reviews and tips on everything audio; and our FREE Polk Audio Newspaper.

We take your privacy seriously. Polk Audio does not share or sell information to any other parties, unless directed by court order.

Registering your product has no effect on your warranty. Warranties apply as stated in your product manual. Please be sure to keep your original purchase receipt.

No Internet access? Call Polk Audio Customer Service 800-377-7655 (US & Canada only). Outside the US & Canada, call 410-358-3600. We'll walk you through the simple registration process!

polkaudio<sup>®</sup>

Modèle de produit et numéro de série. Inscrivez ce numéro dans la case « serial number » lors de l'enregistrement du produit en ligne. Conservez cette carte en guise de référence au modèle et au numéro de série lorsque vous contactez le Service à la Clientèle de Polk.

Modèle et numéro de série du produit dans l'encadré au verso.

# Enregistrez Votre Nouveau Produit Polk Audio En Ligne dès maintenant et courez la chance de gagner pour 500\$ de produits Polk www.polkaudio.com/registration/

Devenez un membre privilégié de la famille Polk et courez la chance de gagner des haut-parleurs gratuits. Avantages de l'enregistrement de votre nouveau produit:

- L'enregistrement crée une attestation permanente de votre achat au cas où vous égareriez votre facture originale.
- ➤ Vous inscrit gratuitement à notre tirage mensuel de haut-parleurs Polk d'une valeur de 500\$.
- Vous permet de vous enrôler dans le Club Polk vous pourrez ainsi participer à des forums informatifs sur le site web de Polk, profiter de rabais spéciaux au magasin en ligne Polk Webstore, obtenir une prévision des promotions Polk et bénéficier de rabais sur les pièces autorisées Polk Audio.
- ▶ Vous permet de recevoir les toutes dernières informations concernant votre produit.
- Vous permet de recevoir les « Audio Enjoyment Enhancers » de Polk Audio des courriels mensuels offrant nouvelles, critiques et conseils en matière d'audio, et notre journal Polk Audio GRATUIT.

Votre confidentialité nous tient à coeur. Polk Audio ne partage pas et ne vend jamais votre information à un tiers parti, sauf par injonction.

L'enregistrement de votre produit n'a aucun effet sur votre garantie. Les garanties sont valides telles que décrites dans votre manuel de l'utilisateur. Veuillez vous assurer de conserver votre facture originale.

Vous n'avez pas accès à l'Internet ? Contactez le Service à la Clientèle de Polk Audio au 800-377-7655 (É.U. et Canada seulement). À l'extérieur des É.U. et du Canada, signalez le 410-358-3600. Nous nous feront un plaisir de vous aider à enregistrer votre produit.

Questions? Soucis? Contactez le Service à la Clientèle de Polk Audio, de 9h00 à 18h00 HNE (É.U.) au 800-377-7655 (É.U. et Canada seulement). À l'extérieur des É.U. et du Canada, signalez le 410-358-3600, polkcs@polkaudio.com